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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,964	02/16/2000	Yasuhiko Shinjo	CU-2130-RJS	6722

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EXAMINER

CHEN, TIANJIE

ART UNIT PAPER NUMBER

2652

DATE MAILED: 05/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Me

Office Action Summary

Application No.

09/504,964

Applicant(s)

SHINJO ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Non-Final rejection

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Dirne et al (US 5,896,253).

With regard to claim 1, Dirne et al shows a magnetic head device including: a base member 1 (Figs 2 and 4; column 3, lines 38-46); a thin-film magnetic head 198+3+21 +9+E11+19a (Fig. 2; column 4, lines 8-27) which is in contact with the base member 1 (Fig. 2) and is accommodated in a non-magnetic layer 25 (Fig. 2; column 4, line 25), with a magnetic gap S11 (Fig. 2, column 3, line 48) being exposed (it is

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interpreted as "exposed through the non-magnetic insulating layer at the top end of the magnetic head" as set forth in p. 5, lines 32-33 in this Application); an auxiliary member 3 (Fig. 4) which sandwiches the non-magnetic layer 25 between the auxiliary member 3 and the base member 1; and a slider surface 5 (Fig. 2) which magnetic tape 7 (Fig. 2; column 4, line 14 and column 2, lines 6-7) slides in a first direction x (Fig. 2) along which the base member 1, the non-magnetic layer 25, and the auxiliary member 3 are arranged.

With regard to claim 2, Dirne et al further shows that the thin-film magnetic head is a magnetoresistive head MR (column 3, lines 58-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dirne et al in view of Isomura et al (US 5,227,940).

Dirne et al shows a magnetic head device as described above, but does not specify that in this device the non-magnetic layer on the slider surface has an area of 0.02 mm X 0.008 mm or less.

Isomura et al shows a magnetic head device, wherein the non-magnetic layer 2 (Fig. 1, column 14, line 32) has a thickness $b = 2 \times 10^{-6}$ mm (Column 16, line 8), and a

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length of the widthwise contour, which is less than $2d=0.04$ mm (Column 16, line 4);
the area of the non-magnetic layer on the slider surface is less than

0.000002 mm X 0.04 mm,

which is less than 0.02 mm X 0.08 mm.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to set the area of the non-magnetic layer on the slider surface in Dirne et al's device being 0.02 mm X 0.08 mm or less. The rationale is as follows: no unexpected effect resulted from the specific numbers of 0.02 mm X 0.08 mm was disclosed in this Application. One of ordinary skill in the art would have been searching for the size of the area through experimentation and optimization. Isomura et al discloses a similar magnetic head device, wherein the size of the area of the non-magnetic layer on the slider surface is less than 0.000002 mm X 0.04 mm, which is less than 0.02 mm X 0.08 mm. One of ordinary skill in the art would have been motivated to find a usable size of the area through experimentation and optimization, which would include the numbers disclosed by Isomura et al, which is less than 0.02 mm X 0.08 mm.

Conclusion

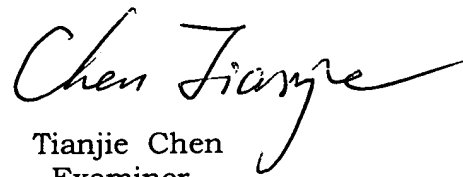
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US006222701B1 to Tamura et al with a single crystal ferrite.
- US005864451A to Sato with inclined sensor.
- US005694277A to Lee with an auxiliary member.
- US005515222A to Kumagai et al with multiple gaps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.


Tianjie Chen
Examiner
Art Unit 2652

May 22, 2002